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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/994,642

12/19/1997

TOSHIKAZU YANAI

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02/24/2011

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EXAMINER

HENN, TIMOTHY J

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

02/24/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 08/994,642	Applicant(s) YANAI ET AL.	
	Examiner TIMOTHY J. HENN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-26, 29-34 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 2 is/are allowed.
- 6) ☒ Claim(s) 3-10, 13-26, 29 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 1997 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01 November 2004 has been entered.

Response to Arguments

2. Applicant's arguments, see response, filed 01 November 2004, with respect to the rejection(s) of claim(s) 3, 5, 7, 9, 13, 15, 17 and 36 under 35 USC §102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made below.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3-10, 13-26, 29-34 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

[claims 3-10, 13-26, 29-34 and 36]

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5. Claim 3 recites a control unit which “generates unit-sequentially different color difference signals”. Claim 4 similarly recites “an image signal ... is outputted as a line-sequential color difference signal”. However, the specification (see corresponding US-PGPUB 2002/0057354) describes outputting signals S(odd) containing color components (Ye+Mg) and (Cy+G) (Paragraph 0047 and 0064) and S(even) containing color components (Ye+G) and (Cy+Mg) (Paragraph 0049 and 0069). The specification further recites “[t]he signals S(odd) and S(even) constitute line-sequential color difference signals” (Paragraph 0049 and 0069).

6. The IEEE Standard Dictionary of Electrical and Electronics Terms defines a color-difference signal as “[a]n electrical signal that, when added to the luminance signal, produces a signal representative to one of the tristimulus values (with respect to the stated set of primaries) of the transmitted color”. Color difference signals, as usually thought of in the art, include signals such as R-Y and B-Y, Cb and Cr, I and Q, etc. Therefore, it is believed that the signals S(odd) and S(even) as defined in the specification are not color difference signals. Furthermore, it is unclear whether the statements in Paragraphs 0049 and 0069 are meant as an explicit definition which would redefine the term “color difference signal” to include signals such as S(odd) and S(even). Therefore, it is unclear what is intended to be covered by the term “color difference signal” in claims 3 and 4.

7. For these reasons, claims 3 and 4, as well as claims 5-10, 13-26, 29-34 and 36 due to their dependence on either claim 3 or 4, are indefinite. For the purposes of art rejection, “color difference signal” will be read as defined above by IEEE, and including

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signals such as R-Y and B-Y, Cb and Cr, I and Q, etc.

[claims 3, 5, 7, 9, 13, 15, 17 and 36]

8. Claim 3 recites a control unit which “generates unit-sequentially different color difference signals from the units adjacent to each other so that the color difference signals generated from adjacent units are different; and the color difference signals generated from every other unit are equal”. However, it is unclear whether by use of the term “equal”, Applicant intends for the signals value to be mathematically equal (e.g. $\text{Signal_1} = \text{Signal_3}$ and $\text{Signal_1} \neq \text{Signal_2}$) or for the signals to be of the same type (e.g. Signal_1 and Signal_3 are both R-Y signals while Signal_2 is a B-Y signal).

9. For this reason, claim 3, as well as claims 5, 7, 9, 13, 15, 17 and 36 due to their dependence on claim 3, are indefinite. Due to Applicants use of the mathematical term “equal”, especially for comparing signals which typically are defined in mathematical terms, claim 3 will be read as requiring the same signal value (e.g. $\text{Signal_1} = \text{Signal_3}$) for color difference signals generated from every other unit.

Allowable Subject Matter

10. Claims 1 and 2 are allowed.

11. Claims 3-10, 13-26, 29-34 and 36 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. However, any amendments made to these claims to overcome the 35 USC §112, 2nd paragraph rejections which change the scope of the claims will require reconsideration of the indication of allowability.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

i. Udagawa et al. US 5,737,017

13. Udagawa discloses a CCD type image sensor including a control unit arranged to divide the plurality of pixels on a unit basis of a predetermined number of lines), which includes a plurality of first lines alternating with a plurality of second lines (Figure 2, every 2 lines constitutes 1 unit), and arranged to add the signals of the pixels of adjacent first lines and second lines to generate a color component signal from every unit (Figure 3, C1, C2, C3 and C4 constitute color component signals; c. 2, ll. 1-13), wherein the control unit generates unit-sequentially different color component signals from the units adjacent to each other so that the color component signals generated from adjacent units are different (Figures 2 and 3, in an even field 1st units generate C1 and C2 component signals while 2nd units generate C3 and C4 component signals); and the color difference signals generated from every other unit are of the same type (Figures 2 and 3, in an even field 1st units generate C1 and C2 component signals, which is the same type generated by every other unit (i.e. 3rd, 5th, etc)). However, in Udagawa, the component signals are not believed to be color difference signals, and furthermore the color component signals are not disclosed to be equal (e.g. having the same signal value).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY J. HENN whose telephone number is (571)272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J Henn/
Primary Examiner, Art Unit 2622